Germany

Air Transport Regulatory Competitiveness Indicators

SUMMARY

- Air transport is a key enabler of economic activity in Germany, supporting 1.1 million total jobs and contributing EUR 77.8 billion to the German economy, which is equivalent to 2.5% of German GDP (2016).
- Germany is the second largest aviation market in Europe (measured by IATA Connectivity Index[1]).
  Air connectivity grew by 30% between 2013 and 2018. 117m passengers departed from Germany's airports in 2017. There were 235.9 million terminal passengers.
- In order to facilitate continued growth of aviation and maximize the value of air transport, Germany should:
  1. Abolish the Aviation Tax;
  2. Improve capacity on the ground and in the air and improve operational efficiency in particular by increasing air traffic control (ATC) capacity and minimising Air Traffic Flow Management (ATFM) delays; this is a short- and long-term necessity to improve flexibility and to cope with increasing demands;
  3. Increase cost-efficiency of ATC services in particular by promoting implementation of a functioning Single European Sky (SES) with cost-efficient structures (including automatization, speedy implementation of SESAR). Use concepts as Remote Tower Control and tendering of Tower Services to shift from "system charges" to local Terminal Navigation Charges (which are higher than in comparable markets due to cross-financing);
  4. Focus on cost-efficient airport charges including adopting Single Till to reflect normal market conditions; and
  5. Promote innovative technology and processes for border security and customs.

[1] The IATA Connectivity Index 2018 is a composite measure of number of transferred passengers weighted by a destination measure in all German airports

ABOUT AIR TRANSPORT REGULATORY COMPETITIVENESS

The Air Transport Regulatory Competitiveness Indicators (ATRCI) is a framework that measures a country's air transport regulatory competitiveness. Air transport regulatory competitiveness is defined as the set of institutions, policies and factors that determine the economic benefits that the economy can derive from aviation.

Five key determinants of the ease of doing business have been identified, which contribute to the regulatory competitiveness of a country. These five determinants are the pillars that form the ATRCI and for which performance-based assessments have been made:

Passenger Facilitation (visa requirements, open skies agreements, passenger information and border control processes). These measures support easier movement of persons around the globe and contribute to economic development and growth. Regulations that allow for easier and more secure movement of people and aircraft are therefore essential in unlocking the economic benefits of aviation.

Cargo Facilitation (trade facilitation and e-freight). These measures enhance shippers' experience by enabling the seamless cross-border movement of goods.

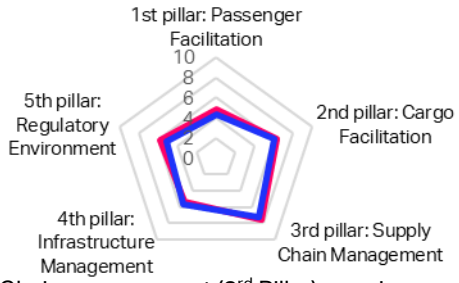
Supply Chain Competitiveness (airport and passenger charges and taxes, airport and air traffic management charging process, fuel supply management, labour efficiency). The competitive, transparent, and reliable supply of services to airlines creates an environment in which passenger demand can be stimulated through more affordable air fares. Effective and clear rules create a stable environment which boost economic growth.

Infrastructure (available runway and terminal capacity and slots). Air transport depends largely on available infrastructure and how efficiently congested infrastructure is utilized. Without sufficient capacity, airlines cannot enter the market, enhance air connectivity of the country and create seamless connections and short travel times. Effective infrastructure development and management acts as a facilitator of economic growth unlocking benefits that aviation creates.

Regulatory Environment (regulatory framework, legal framework, regulatory implementation). Without stable, clear and transparent regulations, airlines cannot operate effectively and offer competitive ticket prices or air freight rates. A smart regulatory environment and a comprehensive aviation policy are key drivers of positive economic change.

PERFORMANCE OVERVIEW

Index Component	Germany	Regional average[2]
Air Transport Regulatory Competitiveness Index[3]	**6.1**	**5.8**
1st pillar: Passenger Facilitation	4.8	4.4
2nd pillar: Cargo Facilitation	6.3	6.1
3rd pillar: Supply Chain Management	7.6	7.2
4th pillar: Infrastructure Management	5.3	5.6
5th pillar: Regulatory Environment	5.8	5.1



Supply Chain management (3rd Pillar) remains a pressing issue in spite of the relatively high score. High passenger charges and taxes represent a brake on competitiveness and significantly increase the cost of traveling by air to, from and within Germany (see more on page 3).

Germany has made improvements in a number of key air trade facilitation metrics, facilitating the smooth transport of cargo across borders. Nonetheless, in spite of good overall performance in Cargo Facilitation (2nd Pillar), there is still much do to in order to enable innovative new processes and digital transformation in air cargo and mail, for example in the field of customs and cargo security.

Germany also lags behind in the Infrastructure (4th Pillar) with constrained capacity of both runway and terminals. In spite of the congested capacity, both policies and practice in Germany are fully aligned with the World Slots guidelines (WSG) creating both transparency and certainty in the slot allocation process.

The passenger facilitation (1st Pillar) also represents a brake on German competitiveness. While visa rules are relatively open, and ruled on the EU level, Germany has not adopted innovative solutions consistently or effectively (more on page 3). As the border is the initial point of contact for an arriving visitor to Germany, these factors are important in creating a favourable first impression.

Finally, Regulatory Environment still has not fully implemented Smarter Regulations Principles in rulemaking (5th Pillar). Effective processes and practices for policy design and implementation, including stakeholder consultation and impact assessments support the creation of a competitive regulatory framework that enables the business to grow. Germany scores higher than its regional peers but, like all European states, is held back by burdensome and extraterritorial consumer protection rules.

[2] Regional average consists of scores for 17 European countries: AT, BE, DN, DE, ES, FI, FR, GR, IT, NL, NO, PL, PT, RO, SE, CH, UK.

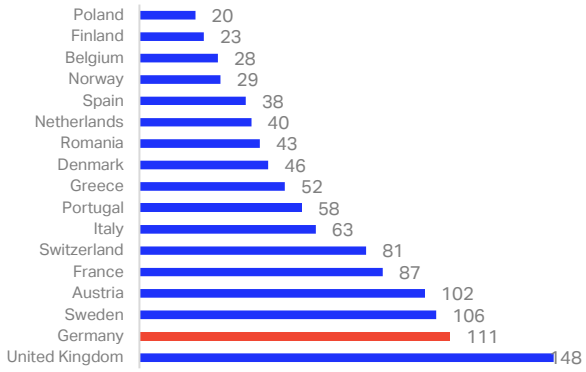
[3] The values for the ATCI range from 0 (worst) to 10 (best). The index consists of 5 pillars and 17 indicators and 26 sub-indicators which are combined together using a simple average (sub-indicators are summed together to create a single value for the indicator). These aggregate values form an index score for the country.

KEY CHALLENGES OF AIR TRANSPORT REGULATORY COMPETITIVENESS IN GERMANY

Aviation brings significant benefits to the German economy. However, there are still substantial barriers to the further growth of air connectivity which would help to unlock the full economic potential of the country. The following page provides an overview of the key challenges of German air transport regulatory competitiveness.

Germany has the second highest level of average costs per passenger for airport and passenger taxes and charges in Europe (Chart 1) and therefore scores relatively low in cost competitiveness. This also includes high costs for aviation security checks that are among the highest in Europe. High taxes and charges on air travel influence both demand and route viability affecting German air connectivity. Moreover, a study by PwC estimates that eliminating all air passenger taxes in the EEA area would lead to the creation of 47,000 jobs within two years and GDP will be €24.9bn larger per year by 2030[4]. It needs to be noted that even though the relatively high score in the supply chain competitiveness Germany also has significant room for improvement in terms of the regulatory oversight of the airline supply chain. The consultation process for the airport and air navigation charges is inefficient and there is the existence of non-cost related airport charges.

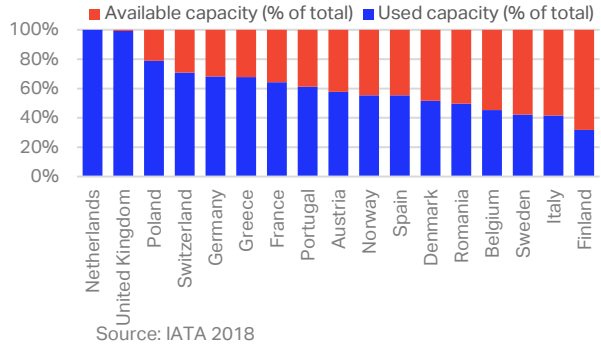
Chart 1. Ranking of countries based on airport and passenger taxes and charges



Source: IATA, ACIC, TTBS, IMF 2018
Ranking ranges from 1 to 148 (lowest to highest charges

Capacity congestion (both runway, airspace) causes delays. Even though the main hub Frankfurt Airport has some spare capacity on an annual level (Chart 2), the daily peaks are already at full capacity. Further tightening of night flight restrictions and shoulder hours (e.g. through higher charges) would hinder aviation growth and harm Germany's attractiveness as a place for business. Berlin Tegel, the most congested airport in Germany, is currently operating at above 93% of declared capacity which is considered as effectively full. This not only acts as a brake on the development of new connectivity, but also means that there is little operational resilience to recover from delays or disruption. Munich Airport is also approaching full capacity if current strong growth continues over the next 10 years. Cost-effective airport expansion is, therefore, a priority, as identified by the Airports Commission. This is critical to maintain Germany's status as a European air transport hub.

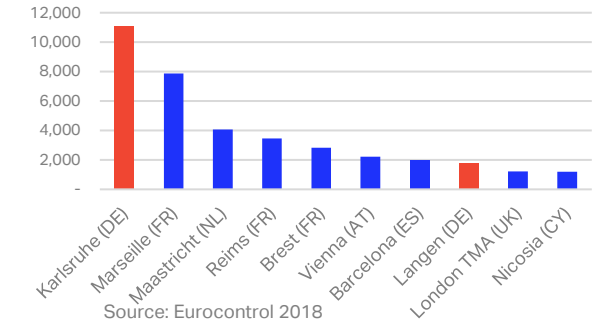
Chart 2. Low runway infrastructure capacity[5]



Source: IATA 2018

Another key challenge is the current situation of Air traffic flow management (ATFM) delays in Europe (Chart 3). Cancellations and severe delays have affected both passengers and businesses which hinders economic growth, mobility and innovation. Two main reasons for such delays are en-route ATC staffing shortages and capacity. Enhanced ATC capacities in the European airspace can be achieved through a more effective cross-border cooperation, the creation of

Chart 2. Top 10 En-route ATFM delays delay locations from January to December 2018[6]



Source: Eurocontrol 2018

conditions for a more flexible cross-sectoral use of air traffic controllers and by greater automation of air navigation services (by deployment of the European SESAR program). Current solutions for Karlsruhe and Maastricht to direct flights to lower flight levels, due to the extensively higher fuel burn, must remain a short-term measure.

Finally, Germany has inefficient allocation of passenger security control management responsibilities among the public and private sector. This causes problems of

[4] PwC 2017
[5] The main hub for each country: AMS, ARN, ATH, BRU, CDG, CPH, FCO, FRA, HEL, LHR, LIS, MAD, OSL, OTP, VIE, WAW, ZRH

[6] Eurocontrol 2018.

process organization and resources allocation in passenger security controls. Lacking flexibility in procurement processes means that responsible government agencies can only react with a delay causing the security process to be costly, and throughput is insufficient in comparison to neighbouring countries. Taken together, the border experience acts as a deterrent for travel to Germany and a brake on competitiveness.

FROM PERFORMANCE MEASURES TO RECOMMENDATIONS

Germany's current aviation strategy has an objective to increase air transport connectivity. It is important to create an environment where business flourish and attract new businesses. Germany should therefore focus on:

1. Abolition of the aviation passenger tax

The German Aviation Tax leads to lost opportunities for German businesses because of higher travel costs. Abolition of the passenger security tax, as part of a wider focus on cost competitiveness, would facilitate and optimize further growth of air connectivity.

2. Implementation of efficient infrastructure

Germany should improve the capacity and efficiency of air transport infrastructure on the ground and in the air. Further infrastructure investment should focus only on those major gateways where demand requires. Moreover, night flight restriction of shoulder hour operations should be avoided or, at a minimum, reduced or kept at the same level. To improve cost efficiency of infrastructure use, Germany should implement strong and robust economic regulation of airport charges and liberalize the access to the airside ground handling market.

3. Promotion of innovative technology and processes, EU harmonization and digitization

Air transport infrastructure processes should be more harmonized with EU legislation and upgraded by digital innovation. This applies, for example, to passenger processes at airports (security, border crossing); air cargo (processes along the logistics chain should be able to cope with modern business models like eCommerce) and innovations in technology (ATM and licensing by authorities).

In 2017, almost 117 million of passengers departed from German airports[7]. There were 235.9 million terminal passengers[8]. The robust air connectivity is an enabler of economic activity in Germany creating 1.1 million jobs and supporting EUR 77.8 billion to the economy in 2016.[9] In the next 20 years the number of departing passengers from Germany will increase by 49%.[10] However, if Germany is able to implement the policies noted in this report, there is an upside potential to increase this value and ultimately deliver wide economic benefits through the higher number of jobs and contribution to GDP.

Chart 4. Forecast scenarios for passenger traffic, jobs and GDP footprint*

		Passengers	EUR GDP	Jobs
2017		116.7 m	€77.8 bn	1.1 m
2037	Current trends	174 m	€116. bn	1.4 m
	Upside	190 m	€126.5 bn	1.5 m
	Downside	151 m	€100.6 bn	1.2 m

* Passengers are counted as departures, including connections. The passenger forecasts are based on the IATA 20-year passenger forecast (October 2018). Data on GDP and jobs are from Oxford Economics. GDP and jobs forecasts are from IATA Economics.

IATA Economics
Air Transport Regulatory Competitiveness Indicators
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The aim of the ATRCI

The Air Transport Regulatory Competitiveness Index is a framework that assesses the regulatory environment across countries and how governments facilitate or inhibit growth of the air transport sector through their regulations. The framework measures a country's aviation regulatory competitiveness and offers a snapshot of where the potential gaps are in following the international best practice. It provides a guideline to build up a more efficient regulatory environment to unlock the economic benefits that aviation creates.

Methodology

ATRCI uses both quantitative and qualitative data that are normalized to 0-to-10. Qualitative data were collated based on an objective framework. Respectively, quantitative data are used from international organizations and partner organizations. Sources: Eurocontrol, United Nations World Tourism Organization, Verisk Maplecroft, World Economic Forum. All dates relate to 2018 unless stated otherwise.

The index structure and computation

The index contains three levels of values which are combined together applying a simple average (if not stated otherwise). From the highest to the lowest level: Index value, Pillar values, Indicator values and Sub-indicator values. At the lowest level (sub-indicator) the values are summed to create one single value for an indicator. All indicator values within a pillar are then aggregated using an arithmetic mean in order to produce the Pillar score. At the highest level of aggregation (Index value), the score of the five pillars are combined applying a simple average to create one single value for Air Transport Regulatory Competitiveness Index for each country.

[7] SRS Analyzer 2017
[8] ACI 2017. Departing passengers includes passengers connecting through Greece and terminal passengers includes both arrivals and departures.
[9] ATAG 2018
[10] Oxford Economics 2017